

STRUCTURE S-310

This structure was originally constructed in 1934 as a hurricane-gated structure No.2, on Herbert Hoover Dike, at the south end of Lake Okeechobee near the city of Clewiston. In 1977 it was modified and converted to a reinforced concrete navigational boat lock, 50 feet wide, and 75 feet long. Electrically operated sector gates, at each end of the locks effect control.

PURPOSE

The structure provides for the passage of boats/floating vessels to and from Lake Okeechobee into the C-21 canal (Clewiston Public Boat Ramp) and the Industrial canal (Marinas and Army Corps of Engineers Tug Boat Basin, and Commercial Fishing Facilities). It also provides water supply from Lake Okeechobee into the Industrial canal, to meet agricultural requirements in the farming region.

OPERATION

The District contractor and the District in certain situations will operate the structure. The structure is operated in conjunction with S-169, S-4, the culverts in LD-1, and S-235 to control water levels in the Industrial canal, and in the S-4 basins according to the following chart.

LAKE OKEECHOBEE STAGE	GATE STATUS				NORMAL RANGE S-4 HW
	S-310	LD-1 Culverts	S-235	S-169	
OVER 15.5	CLOSED	CLOSED	FULL OPEN	AUTO	11-14
14-15.5	FULL OPEN	CLOSED	FULL OPEN	CLOSED	11-14
13-14	FULL OPEN	CLOSED	FULL OPEN	CLOSED	11-14
BELOW 13	FULL OPEN	FULL OPEN	CLOSED	FULL OPEN	BELOW 13

The S-310 navigational locks must be operated whenever Lake Okeechobee is at an elevation of 15.5 feet or higher. When the lake level is below the elevation of 15.5 feet, the locks will be placed in the "open" position, and operation will not be required.

The S-310 navigational locks are operated by an independent contractor, authorized by the South Florida Water Management District, during the following hours of operation:

October 1st through April 30th - 5:30 A.M. to 8:00 P.M.

May 1st through September 30th - 5:30 A.M. to 9:00 P.M.

DRAINAGE AREA FLOOD DISCHARGE CHARACTERISTICS

The S-310 locks are also utilized as a water control structure to provide water supply and flood control.

DESCRIPTION OF STRUCTURE

Type: Reinforced concrete lock, with two pairs of sector gates

Operating Deck Elevations 29 feet Landside, 38 feet Lakeside.

Lock

Length	75 feet
Width	50 feet
Invert Elevation	2.6 feet

Gates

Type	<u>Sector</u>
Size	<u>Upper 28</u> feet high
	<u>Lower 26</u> feet high: 30' - 9 15/16" radius.

Control Manual

Operating Mechanism

Normal Power Source commercial electricity

Emergency Power Source LP engine driven generator

Type double wire rope drum unit with worm type special reducer,
powered by electric motor driven hydraulic motor.

ACCESS

From US HWY 27, westerly from Francisco St. in the city of Clewiston to Herbert Hoover Dyke at the Industrial canal.

DEWATERING FACILITIES

None

Normal Power Sources: Commercial power, and on-site generator.

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